



U.S. Naval Station Roosevelt Roads

EPA ID Number: PR2170027203

Other (Former) Names of Site

None

Site Description

U.S. Naval Station Roosevelt Roads is located on the east coast of the island of Puerto Rico in the municipality of Ceiba, approximately 33 miles southeast of San Juan. The nearest major town is Fajardo, which is 10 miles north of the station. The facility occupies approximately 8000 acres and is bordered on all sides but the west by the Caribbean Sea.

Roosevelt Roads operates a greater than 90 days hazardous waste container storage area, which requires a Resource Conservation and Recovery Act (RCRA) permit. The primary source of hazardous wastes generated today at Roosevelt Roads is the operation and maintenance of aircraft, watercraft, and vehicles. These waste include halogenated and non-halogenated solvents, corrosives, batteries (some reactive), paint wastes, contaminated petroleum/oils/lubricants (POL's) and off-specification, excess, or out-of-date commercial chemical products.

Site Responsibility

The site is being cleaned up under Federal authority, with EPA the lead agency. However, the Puerto Rico Environmental Quality Board (EQB) participates with EPA in cleanup decision making and oversight.

Threats and Contaminants

There are several significant areas of environmental concern; however, since groundwater is not utilized for any purposes at Roosevelt Roads, or down gradient of it, and none of the areas of environmental concern are presently utilized for residential purposes, the most significant current threats are adverse environmental impacts to the surface waters of Ensenada Honda and other marine bays and mangrove areas bordering the facility. In addition, there is a relatively limited potential human health threat for possible impacts to on-site workers, and future residents if the impacted areas were ever utilized for residential purposes. The most significant areas of environmental

concern include:

- Tow Way Fuel Farm (Solid Waste Management Units [SWMUs] #7 & #8) where past releases from product storage tanks have resulted in a large plume of phase separated petroleum hydrocarbons (200,000+ gallons) being present on the groundwater, and dissolved petroleum contaminant plumes are present in the groundwater, and contaminated soils are present.



SWMU #7

- Two long closed (late 1950's/early 1960's), unlined landfills which borders are built out into the surface waters of Ensenada Honda [SWMU #1 (Army Cremator site) and SWMU #2 (Langley Drive disposal area)]. Indications are that in the past they received both non-hazardous and hazardous waste.



SWMU #1



SWMU #2

- A third unlined landfill (SWMU #3), which has been operating since the 1960's as the base's solid [non-hazardous] waste landfill. It is located adjacent to the surface waters of the Caribbean Sea and Ensenada Honda (a marine bay).



SWMU #3

- The long closed thermoelectric power plant (SWMUs #11 & #45) where in the past transformer fluids containing PCBs were disposed of, and includes:



SWMU #45



SWMU #11

area of PCB contaminated soil on flanks of concrete pad surrounding the plant (the soils have been remediated [removed] as an Interim Measure),

abandoned underground cooling water tunnels (have been remediated as an Interim Measure) leading from the power plant to PuercaBay (outfall identified) and Ensenada Honda [Bay](outfall has not been located),

two large (50,000 gallon) underground fuel storage tanks (have been remediated as an Interim Measure).

CLEANUP APPROACH

Cleanup Status/Corrective Action

The site is being addressed in two measures: Interim Corrective Measures and long-term corrective measures directed at cleanup of the entire site.

Response Action Status

The RCRA Facility Assessment (RFA) conducted in 1988 for EPA included a Preliminary Review (PR) and a Visual Site Inspection (VSI). Also, a follow-up VSI inspection was conducted in June 1993, as part of the Draft Permit development. Based on the 1988 RFA and the 1993 follow-up VSI, and previous investigations implemented under the Navy's Installation Restoration (IR) program, fifty-two (52) Solid Waste Management Units (SWMUs) and four Areas of Concern (AOCs) were identified.

The 1994 Final RCRA Permit identified 8 SWMUs [9 originally, but SWMUs #7 and #8 were subsequently combined] and 1 AOC as requiring a full RCRA Facility Investigation (RFI), where either previous sampling had confirmed a release, or the past operation and/or design of the unit strongly indicated a likely release. The purpose of the full RFI is to completely define the horizontal and vertical extent of the release, its composition, and whether migration of the released hazardous waste or constituents is occurring (including the rate, direction, and extent of migration).

In addition, the Permit required "first-phase RFIs" at 16 SWMUs (1 [SWMU #10] was originally contingent) and 2 Areas of Concern (AOCs) where releases are suspected (based on visual evidence or operational history), but not yet confirmed. The purpose of a "first-phase RFI" is to confirm whether in-fact a suspected release has occurred, and whether or not a full RFI is required at that SWMU or AOC.

The RCRA Facility Investigation (RFI) work plans for all SWMUs and AOCs, except for SWMUs #7 and 8 at Tow Way Fuel Farm, was approved in September 1995. The RFI work plan for SWMUs 7 and 8 was approved in January 1996.

Interim Corrective Measures (ICMs)

ICMs have been implemented at 3 areas of environmental concern, which all constitute solid waste management units (SWMUs):

- SWMUs #7 and #8 (Tow Way Fuel Farm) - Phase separated hydrocarbon (PSH) recovery. An estimated 200,000 gallons of PSH are present, floating on the groundwater, and had been migrating to the southeast, along Forestal Road. PSH recovery commenced in 1994 utilizing a temporary recovery system. The system was abandoned in September, 1996, and a new recovery system, consisting of 7 recovery wells, came on line in April 1997. The original temporary and new system have recovered a cumulative total of 15,780 gallons of PSH as of October 31, 1999. However, overall recovery results have been judged unsatisfactory, and it was shut down in October 1999. Since early 1999 extensive pilot testing of several other technologies has been on-going to determine their effectiveness in cleaning up releases at Tow Way Fuel Farm.
- SWMU #10 (Transformer Substation 2) - Extensive excavation of PCB contaminated soils was implemented in 1994.
- SWMU #45 (outside areas at the Old Thermo-electric Power Plant):

Extensive excavation of PCB contaminated soils was implemented in 1994, and

Removal of contents (oily sludge, water, and possible free product, all possibly PCB contaminated) from 2 large (50,000 gallon) underground fuel tanks and 3 concrete cooling water tunnels leading to/from the bay/ocean, followed by cleaning and sealing of them was implemented in 1996.

Cleanup Progress

To date, "first-phase RCRA Facility Investigations (RFIs)" have been completed at all 16 Solid Waste Management Units (SWMUs) and 2 Areas of Concern (AOCs), where required. Full RCRA Facility Investigations (RFIs) have been completed at all but 3 SWMUs where required (nine were ultimately required, as 1 SWMU required a full RFI following completion of the "first-phase RFI"), and for the 1 AOC where required. The 3 SWMUs where the RFIs have not yet been fully completed are: #3 (the Base's current landfill); #9 (fuel storage tanks 212 - 217), and #11 (interior of the old power plant).

Nine SWMUs and two AOCs were found to have releases which required Corrective Measures Studies (CMSs) to determine their final disposition/remedies, including a determination of whether the implemented ICMs are sufficient to constitute the final cleanup. Many of the "final remedies" are expected to be based on land use restrictions; if that is protective of human health and the environment, rather than actual remediation.

Final remedies/corrective measures are presently being evaluated for the following Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs):

- SWMU #1 (former Army Cremator disposal site [abandoned landfill]),
- SWMU #2 (Langley Drive disposal site [abandoned landfill]),
- SWMU #6 (abandoned building 145),
- SWMU #7 [combined with SWMU #8](Tow Way Fuel Farm),
- SWMU #10(Transformer Substation 2),
- SWMU #13 (site of demolished pest control shop),
- SWMU #32 (spent battery accumulation area [in Public Works yard]),
- SWMU #45 (outside areas at the old Power Plant),
- SWMU #46 (Covered Pad at Pole Storage Yard),
- AOC B (site of demolished building 25),
- AOC C (transformer storage pads near building 2042).

Permit Status

The facility has a Resource Conservation and Recovery Act (RCRA) operating Permit for greater than 90 day storage of hazardous waste in the container storage area. The permit became effective November 28, 1994 for a term of five years (until November 28, 1999). The facility submitted a renewal application for the permit on June 10, 1999, and the 1994 Permit remains fully in effect until a new permit becomes effective [or re-issuance is denied].

Site Repository

Copies of supporting technical documents and correspondence cited in the fact sheet are available for public review at the following location:

U.S. Environmental Protection Agency, Region 2
RCRA Records Center
290 Broadway, 15th Floor, Room 1538
New York, New York 10007-1866
Telephone: (212) 637-3043